Response
Application No. 10/781,699
Attorney Docket No. 042115

## AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions of claims in the application.

## LISTING OF THE CLAIMS:

Claim 1 (Currently Amended): A two-way DC-DC converter comprising: a terminal for a low-voltage side; a terminal for a high-voltage side; a transformer including a winding wire for the low-voltage side and a winding wire for the high-voltage side; a switching section for the low-voltage side inserted between the terminal for the low-voltage side and the winding wire for the low-voltage side; a switching section for the high-voltage side inserted between the terminal for the high-voltage side and the winding wire for the high-voltage side; a rectifying element for the low-voltage side connected in parallel with switching elements in the switching section for the low-voltage side; a rectifying element for the high-voltage side connected in parallel with switching elements in the switching section for the high-voltage side; and a control circuit which controls switching elements in the switching section for the low-voltage side and switching elements in the switching section for the high-voltage side, wherein

an LC resonant circuit is provided between the winding wire for the high-voltage side and the switching section for the higher voltage side, thereby waveforms of currents flowing on the winding wires of the low and high voltage side are changed into sinusoidal waveforms and Off timing of each switching element is set in the vicinity of a zero crossing point of a current value

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~~which causes the current flowing on the winding wire of the low and high voltage sides to have~~

~~sinusoidal waveforms.~~


Claim 2 (Cancelled).


Claim 3 (Original):  The two-way DC-DC converter according to claim 1, wherein both

of the switching section for the lower voltage side and the switching section for the higher

voltage side have a configuration in which four switching elements are bridged.